I CLAIM:

Sub A1

1. A receiver for demultiplexing a digital data stream, the digital data stream including data packets each having a packet identifier, so as to retain only those data packets required by the receiver, the receiver comprising:

input circuitry for receiving the digital data stream;

a memory for storing packet identifiers of data packets required by the receiver;

a first control circuit for controlling the storage in the memory of the packet identifiers;

a second control circuit for extracting a packet identifier from a data packet in the digital data stream input to the input circuitry; and

a third control circuit for receiving the extracted packet identifier and determining whether such matches one of the packet identifiers stored in the memory, and for setting a match signal to the second control circuit responsive to a match, wherein the second control circuit demultiplexes the input data packet responsive to the match signal.

2. The receiver of claim 1 in which the third control circuit outputs the address in the memory of the extracted packet identifier responsive to a match, and the second control circuit accesses that address to retrieve control information associated with the packet identifier.

Sub A2

3. The receiver of claim 2 wherein responsive to the control information the second control circuit controls the transfer of the input data packet to a destination address identified by the control information.

4. The receiver of claim 2, wherein responsive to the control information the second control circuit processes the input data packet and transfers the processed input data packet to a destination address identified by the control information.

5. The receiver of claim 1 wherein responsive to the match signal not being set, the second control circuit discards the input data packet.

6. The receiver of claim 1 in which the digital data stream is an MPEG-2 encoded stream.

Sub A3

7. The receiver of claim 6 when dependent on claim 3 in which the input data packet comprises a packetised elementary stream.

8. The receiver of claim 6 when dependent on claim 4 in which the input data packet comprises program specific information, and the receiver further comprises a filter controlled by the second control circuit for filtering sections in the input data packet so as to retain only those data packets having sections required by the receiver.

9. The receiver of claim 1 in which first control circuit is a receiver processor, the second control circuit is a transport processor, and the third control circuit is a search engine.

Sub A4

10. A set-top-box including a receiver for demultiplexing a digital data stream, the digital data stream including data packets each having a packet identifier, so as to retain only those data packets required by the receiver, the receiver comprising:

input circuitry for receiving the digital data stream;

a memory for storing packet identifiers of data packets required by the receiver;

a first control circuit for controlling the storage in the memory of the packet identifiers;

a second control circuit for extracting a packet identifier from a data packet in the digital data stream input to the input circuitry; and

a third control circuit for receiving the extracted packet identifier and determining whether such matches one of the packet identifiers stored in the memory, and for setting a match signal

to the second control circuit responsive to a match, wherein the second control circuit demultiplexes the input data packet responsive to the match signal.

11. A method of demultiplexing a digital data stream input to a receiver, the digital data stream including data packets each having a packet identifier, so as to retain only those data packets required by the receiver, comprising the steps of:

inputting the digital data stream;

storing in a memory, under the control of a first control circuit, all packet identifiers of data packets required by the receiver;

extracting, under the control of a second control circuit, a packet identifier from a data packet in the input digital data stream;

determining, under the control of a third control circuit, whether the extracted packet identifier matches one of the stored packet identifiers;

setting a match signal responsive to a match determined by the third control circuit; and

demultiplexing, under the control of the second control circuit, the input data packet responsive to the match signal.

12. The method of claim 11, further comprising the steps of:

outputting, responsive to a match, the address in memory of the extracted packet identifier;

accessing, under the control of the second control circuit, the address in memory; and

retrieving control information associated with the packet identifier and stored at such address.

13. The method of claim 12 further comprising the step of:

transferring, under the control of the second control circuit, the input data packet to a destination address identified by the control information.

14. The method of claim 12 further comprising the steps of:

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processing, under the control of the second control circuit, the input data packet in dependence on the control information; and

transferring, under the control of the second control circuit, the processed input data packet to a destination address identified by the control information.

15. The method of claim 11 in which the step of demultiplexing comprises discarding the input data packet responsive to the match signal not being set.

16. The method of claim 11 in which the digital data stream is an MPEG-2 encoded stream.

Sub A6

17. The method of claim 16 in which the input data packet comprises a packetised elementary stream.

18. The method of claim 16 in which the input data packet comprises program specific information, and wherein said processing step comprises:

filtering sections in the input data packet so as to retain only those data packets having sections required by the receiver.

19. The method of claim 11 in which the step of determining a match comprises systematically searching the memory.

Sub A7

20. A method of decoding a broadcast digital data signal in a set-top-box comprising inputting the digital data stream;

storing in a memory, under the control of a first control circuit, all packet identifiers of data packets required by the receiver;

extracting, under the control of a second control circuit, a packet identifier from a data packet in the input digital data stream;

determining, under the control of a third control circuit, whether the extracted packet identifier matches one of the stored packet identifiers;

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setting a match signal responsive to a match determined by the third control circuit; and

demultiplexing, under the control of the second control circuit, the input data packet responsive to the match signal.

Add B5